ABSTRACT OF THE DISCLOSURE

In an encryption-decryption apparatus, a transmitting apparatus encrypts input data to output encrypted data. A network transmits the encrypted data. A receiving apparatus takes as input the encrypted data transmitted through the network, and decrypts the data to send output data. A variable configuration processing circuit encrypts the input data. A ROM outputs circuit data serving as a secret key to the variable configuration processing circuit. Another variable configuration processing circuit decrypts the encrypted data. Another ROM outputs circuit data serving as a secret key to the variable configuration processing circuit. This enables a change in hardware according update of an encryption-decryption algorithm, and more rapid processing of the encryption-decryption operation.